

# PATENT SPECIFICATION

NO DRAWINGS

894.001



Date of Application and filing Complete Specification May 10, 1960.

No. 16514/60.

Complete Specification Published April 18, 1962.

Index at acceptance:—Class 49, B1H.

International Classification:—A23c.

## COMPLETE SPECIFICATION

### Milk tablet and process for its manufacture

I, HENRY SECHER BROCHNER, of Vestergade 3, Copenhagen K, Denmark, a Danish Subject, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a milk tablet which is rapidly and completely soluble in warm aqueous liquids such as coffee, tea and cocoa, and to a process for the manufacture of such a tablet.

It is well known to prepare milk powder from whole milk, including condensed milk, and attempts have been made to prepare tablets from such milk powder, but so far it has not been possible to prepare a readily soluble milk tablet which contains nothing but the pure constituents of whole milk. It is the object of the present invention to provide a milk tablet or other similar shaped body of dried milk powder which is readily soluble in warm water although it does not contain to impart solubility any chemicals or other substances not already present in whole milk.

The milk tablet according to the invention is distinguished by its composition which is different from the composition of the well known milk powders obtainable by removing the water from whole milk. According to the invention a milk tablet which is rapidly and completely soluble in warm water is composed of 10—29% butter fat, 7—15% milk proteins, 15—65% milk carbohydrates and minor amounts of inorganic milk constituents and water, and is enriched with respect to one or more of the butter fat, protein or carbohydrate. By the term "milk proteins" and "milk carbohydrates" are to be understood those proteins or carbohydrates respectively which are present in milk. In practice, these are mostly casein or lactose with minor proportions of other proteins and carbohydrates.

In a preferred embodiment according to

the invention the composition of the milk tablet, based on its solids content, is within three per cent either side of 20% butter fat, 10% milk proteins, 60% milk carbohydrates and 10% inorganic milk constituents.

The invention also concerns a process for the manufacture of a readily soluble milk tablet, which process consists in preparing powdered preparations consisting essentially of the butter fat and the milk proteins, and mixing these preparations with milk carbohydrates in the proportions of 10—29 parts of butter fat, 7—15 parts of milk proteins and 15—65 parts of milk carbohydrates, and afterwards processing the dry mixture into the form of tablets, whereby is meant any shaped body whether cube, pill, disc or other shape of the type normally prepared by compression of solid particles in order to obtain a convenient standardized dosage form which will give the desired colouring effect in warm drinks like coffee and tea.

In a preferred embodiment according to the invention the milk tablet is prepared by drying condensed milk containing at least 6% fat and mixing the resulting powder with milk proteins and lactose to give a mixture of the proportions mentioned in the preceding paragraph.

Milk tablets prepared according to the invention are soluble in warm coffee and tea as rapidly and completely as lump sugar. They have good keeping qualities and offer the advantage of less storage space and ease of distribution.

#### WHAT I CLAIM IS:—

1. A milk tablet containing the natural constituents of milk but enriched with respect to one or more constituent and composed of 10—29% of butter fat, 7—15% of milk proteins, 15—65% of milk carbohydrates and minor amounts of inorganic milk constituents and water.

2. A milk tablet as claimed in Claim 1, in which the composition, based on solids con-

50

55

60

65

70

75

80

85

90

tent, is within 3 per cent either side of 20% of butter fat, 10% of milk proteins, 60% of milk carbohydrates, and 10% of inorganic milk constituents and water.

- 5 3. A process for the manufacture of a milk tablet which is rapidly and completely soluble in warm aqueous liquids such as coffee and tea which comprises preparing powdered preparations consisting of butter fat and milk proteins together with minor proportions of inorganic milk constituents and water and mixing these preparations with milk carbohydrates, to give the resulting mixture the proportions, 10—29% parts of butter fat to 7—15 parts of milk proteins to 15—65 parts of milk carbohydrates, to give a dry mixture

containing the natural constituents of milk but enriched with respect to one or more constituents and processing the dry mixture into tablet form.

4. A process as claimed in Claim 3 which comprises drying condensed milk containing at least 6% fat, mixing the resulting powder which contains minor proportions of inorganic milk proteins and water, with milk proteins and lactose to give the resulting mixture the proportions, 10—29 parts of butter fat, 7—15 parts of milk proteins and 16—65 parts of milk carbohydrates, and preparing tablets from the resulting mixture.

MARKS & CLERK.

Leamington Spa: Printed for Her Majesty's Stationery Office by the Courier Press.—1962.  
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.